#2

0200

OIPE

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/575,554

DATE: 05/31/2000 TIME: 17:30:51

Input Set : A:\ESPTO.txt

Output Set: N:\CRF3\05312000\I575554.raw

```
3 (1) GENERAL INFORMATION:
              (i) APPLICANT: Monia, B.P., Cowsert, L.M. and Manoharan, M.
             (ii) TITLE OF INVENTION: Antisense Oligonucleotide Inhibition of ras
            (iii) NUMBER OF SEQUENCES: 55
             (iv) CORRESPONDENCE ADDRESS:
                   (A) ADDRESSEE: Jane Massey Licata
                   (B) STREET: 66 East Main Street
                   (C) CITY: Marlton
                   (D) STATE: NJ
     13
                   (E) COUNTRY: USA
     14
              (F) ZIP: 08053
(V) COMPUTER READABLE FORM:
     15
     16
                   (A) MEDIUM TYPE: DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
     17
     18
                    (B) COMPUTER: IBM COMPATIBLE
     19
                   (C) OPERATING SYSTEM: WINDOWS 95
     20
                   (D) SOFTWARE: WORDPERFECT 6.1 for WINDOWS
C--> 21
             (vi) CURRENT APPLICATION DATA:
C--> 22
                   (A) APPLICATION NUMBER: US/09/575,554
                   (B) FILING DATE: 22-May-2000
C--> 23
     24
                   (C) CLASSIFICATION:
C--> 37
            (vii) PRIOR APPLICATION DATA:
                   (A) APPLICATION NUMBER: 09/128,494
     26
     27
                   (B) FILING DATE: August 3, 1998
                   (A) APPLICATION NUMBER: 08/411,734
                   (B) FILING DATE: April 3, 1995
     30
                   (A) APPLICATION NUMBER: PCT/US93/09346
     32
                   (B) FILING DATE: October 1, 1993
(A) APPLICATION NUMBER: 07/958,134
     35
     36
                   (B) FILING DATE: October 5, 1992
     38
                   (A) APPLICATION NUMBER: 08/007,996
     39
                   (B) FILING DATE: January 21, 1993
          (viii) ATTORNEY/AGENT INFORMATION:
                   (A) NAME: Jane Massey Licata
                   (B) REGISTRATION NUMBER: 32,257
                   (C) REFERENCE/DOCKET NUMBER: ISPH-0463
             (ix) TELECOMMUNICATION INFORMATION:
     44
                   (A) TELEPHONE: (856) 810-1515
     45
        (B) TELEFAX: (856) 810-1454
(2) INFORMATION FOR SEQ ID NO: 1:
(i) SEQUENCE CHARACTERISTICS:
     46
     48
     49
                   (A) LENGTH: 20
     50
                   (B) TYPE: Nucleic Acid
     51
     52
                   (C) STRANDEDNESS: Single
     53
                   (D) TOPOLOGY: Linear
     54
             (iv) ANTI-SENSE: Yes
             (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:
             CTTATATTCC GTCATCGCTC
                                                                                       20
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ENTERED

DATE: 05/31/2000

PATENT APPLICATION: US/09/575,554 TIME: 17:30:51 Input Set : A:\ESPTO.txt Output Set: N:\CRF3\05312000\1575554.raw 58 (2) INFORMATION FOR SEQ ID NO: 2: (i) SEQUENCE CHARACTERISTICS: 59 60 (A) LENGTH: 20 61 (B) TYPE: Nucleic Acid (C) STRANDEDNESS: Single (D) TOPOLOGY: Linear (iv) ANTI-SENSE: Yes 63 64 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2: C--> 65 20 TCCGTCATCG CTCCTCAGGG 66 68 (2) INFORMATION FOR SEQ ID NO: 3: 69 (i) SEQUENCE CHARACTERISTICS: 70 (A) LENGTH: 17 71 (B) TYPE: Nucleic Acid 72 (C) STRANDEDNESS: Single 73 (D) TOPOLOGY: Linear (iv) ANTI-SENSE: Yes (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3: C--> 75 76 CCACACCGAC GGCGCCC 78 (2) INFORMATION FOR SEQ ID NO: 4: 17 79 (i) SEQUENCE CHARACTERISTICS: 80 (A) LENGTH: 19 81 (B) TYPE: Nucleic Acid 82 (C) STRANDEDNESS: Single 83 (D) TOPOLOGY: Linear (iv) ANTI-SENSE: Yes 84 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4: C--> 85 86 CCCACACCGA CGGCGCCCA
88 (2) INFORMATION FOR SEQ ID NO: 5:
89 (i) SEQUENCE CHARACTERISTICS: 19 (A) LENGTH: 21 90 91 (B) TYPE: Nucleic Acid 92 (C) STRANDEDNESS: Single 93 (D) TOPOLOGY: Linear 94 (iv) ANTI-SENSE: Yes C--> 95 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5: GCCCACACCG ACGGCGCCCA C 21 96 98 (2) INFORMATION FOR SEQ ID NO: 6: (i) SEQUENCE CHARACTERISTICS: 99 (A) LENGTH: 23
(B) TYPE: Nucleic Acid
(C) STRANDEDNESS: Single 100 101 102 (D) TOPOLOGY: Linear 103 104 (iv) ANTI-SENSE: Yes C--> 105 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6: 106 TGCCCACACC GACGGCGCCC ACC 23 108 (2) INFORMATION FOR SEQ ID NO: 7:

RAW SEQUENCE LISTING

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20 (B) TYPE: Nucleic Acid

109

110 111

DATE: 05/31/2000

PATENT APPLICATION: US/09/575,554 TIME: 17:30:51 Input Set : A:\ESPTO.txt Output Set: N:\CRF3\05312000\I575554.raw (C) STRANDEDNESS: Single 112 113 (D) TOPOLOGY: Linear 114 (iv) ANTI-SENSE: Yes C--> 115 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7: TATTCCGTCA TCGCTCCTCA 116 118 (2) INFORMATION FOR SEQ ID NO: 8: (i) SEQUENCE CHARACTERISTICS: 119 (A) LENGTH: 5
(B) TYPE: Nucleic Acid 120 121 (C) STRANDEDNESS: Single 122 123 (D) TOPOLOGY: Linear 124 (iv) ANTI-SENSE: Yes C--> 125 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8: 126 CGACG (2) INFORMATION FOR SEQ ID NO: 9: 128 (i) SEQUENCE CHARACTERISTICS: 129 (A) LENGTH: 7 130 (B) TYPE: Nucleic Acid (C) STRANDEDNESS: Single 131 132 133 (D) TOPOLOGY: Linear 134 (iv) ANTI-SENSE: Yes C--> 135 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9: 136 CCGACGG 7 (2) INFORMATION FOR SEQ ID NO: 10: 138 (i) SEQUENCE CHARACTERISTICS: 139 (A) LENGTH: 9
(B) TYPE: Nucleic Acid 140 141 (C) STRANDEDNESS: Single 142 (D) TOPOLOGY: Linear 143 144 (iv) ANTI-SENSE: Yes C--> 145 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 10: ACCGACGGC 9 146 148 (2) INFORMATION FOR SEQ ID NO: 11: (i) SEQUENCE CHARACTERISTICS: 149 (A) LENGTH: 11 (B) TYPE: Nucleic Acid 150 151 (C) STRANDEDNESS: Single (D) TOPOLOGY: Linear 152 153 154 (iv) ANTI-SENSE: Yes C--> 155 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 11: 156 CACCGACGGC G 11 158 (2) INFORMATION FOR SEQ ID NO: 12: (i) SEQUENCE CHARACTERISTICS: 159 (A) LENGTH: 13 160 (B) TYPE: Nucleic Acid 161 (C) STRANDEDNESS: Single (D) TOPOLOGY: Linear 162 163

RAW SEQUENCE LISTING

(iv) ANTI-SENSE: Yes

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 12:

164 C--> 165 RAW SEQUENCE LISTING DATE: 05/31/2000 PATENT APPLICATION: US/09/575,554 TIME: 17:30:51

Input Set : A:\ESPTO.txt

Output Set: N:\CRF3\05312000\1575554.raw

```
ACACCGACGG CGC
                                                                                   13
     168 (2) INFORMATION FOR SEQ ID NO: 13:
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                    (A) LENGTH: 15
     170
                    (B) TYPE: Nucleic Acid
     171
                    (C) STRANDEDNESS: Single (D) TOPOLOGY: Linear
     172
     173
              (iv) ANTI-SENSE: Yes
     174
C--> 175
              (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 13:
                                                                                         15
     176
               CACACCGACG GCGCC
     178 (2) INFORMATION FOR SEQ ID NO: 14:
     179
               (i) SEQUENCE CHARACTERISTICS:
                    (A) LENGTH: 16
     180
     181
                    (B) TYPE: Nucleic Acid
                    (C) STRANDEDNESS: Single (D) TOPOLOGY: Linear
     182
     183
              (iv) ANTI-SENSE: Yes
     184
C--> 185
              (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 14:
                                                                                         16
     186
               CCACACCGAC GGCGCC
     188 (2) INFORMATION FOR SEQ ID NO: 15:
               (i) SEQUENCE CHARACTERISTICS:
     189
                    (A) LENGTH: 16
     190
     191
                    (B) TYPE: Nucleic Acid
                    (C) STRANDEDNESS: Single (D) TOPOLOGY: Linear
     192
     193
              (iv) ANTI-SENSE: Yes
     194
              (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 15:
C--> 195
     196
               CACACCGACG GCGCCC
                                                                                           16
     198 (2) INFORMATION FOR SEQ ID NO: 16:
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               (i) SEQUENCE CHARACTERISTICS:
     200
                    (A) LENGTH: 18
                    (B) TYPE: Nucleic Acid
     201
                    (C) STRANDEDNESS: Single
     202
     203
                    (D) TOPOLOGY: Linear
     204
              (iv) ANTI-SENSE: Yes
              (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 16:
C--> 205
                                                                                   18
               CCCACACCGA CGGCGCCC
     206
     208 (2) INFORMATION FOR SEQ ID NO: 17:
     209
               (i) SEQUENCE CHARACTERISTICS:
     210
                    (A) LENGTH: 18
     211
                    (B) TYPE: Nucleic Acid
     212
                    (C) STRANDEDNESS: Single
                    (D) TOPOLOGY: Linear
     213
              (iv) ANTI-SENSE: Yes
     214
              (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 17:
C--> 215
               CCACACCGAC GGCGCCCA
                                                                                   18
     216
     218 (2) INFORMATION FOR SEQ ID NO: 18:
               (i) SEQUENCE CHARACTERISTICS:
     219
     220
                    (A) LENGTH: 25
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DATE: 05/31/2000 RAW SEQUENCE LISTING PATENT APPLICATION: US/09/575,554 TIME: 17:30:51 Input Set : A:\ESPTO.txt Output Set: N:\CRF3\05312000\I575554.raw 221 (B) TYPE: Nucleic Acid 222 (C) STRANDEDNESS: Single 223 (D) TOPOLOGY: Linear 224 (iv) ANTI-SENSE: Yes (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 18: C--> 225 226 TTGCCCACAC CGACGGGGCC CACCA
228 (2) INFORMATION FOR SEQ ID NO: 19:
229 (i) SEQUENCE CHARACTERISTICS: 25 230 (A) LENGTH: 17 231 (B) TYPE: Nucleic Acid 232 (C) STRANDEDNESS: Single 233 (D) TOPOLOGY: Linear 234 (iv) ANTI-SENSE: Yes (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 19: C--> 235 236 CCACACCGCC GGCGCCC
238 (2) INFORMATION FOR SEQ ID NO: 20: 17 (i) SEQUENCE CHARACTERISTICS: 239 240 (A) LENGTH: 20 241 (B) TYPE: Nucleic Acid 242 (C) STRANDEDNESS: Single 243 (D) TOPOLOGY: Linear 244 (iv) ANTI-SENSE: Yes (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 20 C--> 245 CTGCCTCCGC CGCCGCGCC 20 246 248 (2) INFORMATION FOR SEQ ID NO: 21: (i) SEQUENCE CHARACTERISTICS: 249 250 (A) LENGTH: 20 251 (B) TYPE: Nucleic Acid 252 (C) STRANDEDNESS: Single 253 (D) TOPOLOGY: Linear 254 (iv) ANTI-SENSE: Yes C--> 255 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 21: CAGTGCCTGC GCCGCGCTCG 20 256 258 (2) INFORMATION FOR SEQ ID NO: 22: (i) SEQUENCE CHARACTERISTICS: 259 (A) LENGTH: 20 260 (B) TYPE: Nucleic Acid 261 262 (C) STRANDEDNESS: Single 263 (D) TOPOLOGY: Linear 264 (iv) ANTI-SENSE: Yes C--> 265 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 22: AGGCCTCTCT CCCGCACCTG 20 266 268 (2) INFORMATION FOR SEQ ID NO: 23: (i) SEQUENCE CHARACTERISTICS: 269 270 (A) LENGTH: 20 (B) TYPE: Nucleic Acid 271

(C) STRANDEDNESS: Single

(D) TOPOLOGY: Linear

(iv) ANTI-SENSE: Yes

272

273

274

VERIFICATION SUMMARY DATE: 05/31/2000 PATENT APPLICATION: US/09/575,554 TIME: 17:30:52

Input Set : A:\ESPTO.txt

Output Set: N:\CRF3\05312000\I575554.raw

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L:28 M:220 C: Keyword misspelled or invalid format, [(vii) PRIOR APPLICATION DATA:]
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L:34 M:220 C: Keyword misspelled or invalid format, [(vii) PRIOR APPLICATION DATA:]
L:37 M:220 C: Keyword misspelled or invalid format, [(vii) PRIOR APPLICATION DATA:]
L:55 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
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L:95 M:220 C: Keyword misspelled or invalid format, {(xi) SEQUENCE DESCRIPTION: SEQ ID NO:}
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L:115 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
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L:145 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:155 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:165 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:175 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:185 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:195 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:205 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:215 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:225 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:235 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:245 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:255 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:265 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:275 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:285 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:295 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:305 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:315 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:325 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:335 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:345 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
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L:425 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:435 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:445 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:455 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:465 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:475 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
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VERIFICATION SUMMARY

DATE: 05/31/2000 TIME: 17:30:52

PATENT APPLICATION: US/09/575,554

Input Set : A:\ESPTO.txt
Output Set: N:\CRF3\05312000\I575554.raw

L:485 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:] L:495 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]